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KIRTON AND MCCONKIE
1800 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
P O BOX 45120
SALT LAKE CITY, UT 84145-0120

EXAMINER

NGUYEN, MICHELLE P

ART UNIT PAPER NUMBER

2851

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/982,631

Applicant(s)

LIEN, CHUN-HUNG

Examiner

Michelle Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11, 12, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 5-10, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected because:
 - (a) On page 1, line 15, "stander" should be --standard--.
 - (b) On page 7, line 6, "back light source 43" should be --back light source 33--.
 - (c) On page 4, lines 6, 19, "receiving" should be --generating--. It is understood that the button generates a command, which is then received by the pressure-drawing module(s).
 - (d) On page 5, lines 10, 18, "receiving" should be --generating--. It is understood that the button generates a command, which is then received by the pressure-drawing module(s).Appropriate correction is required.
2. Claims 3, 5, 9 and 12-14 are objected to because:
 - (a) In claim 3, line 5, "on" should be deleted.
 - (b) In claim 3, line 1, "mechanism" should be --machine--.
 - (c) In claim 5, line 3, "receiving" should be --generating--. It is understood that the button generates an activation command, which is then received by the pressure-drawing modules.
 - (d) In claim 5, lines 4-5, "X-axial direction" should be --an X-axial direction--.
 - (e) In claim 5, lines 7-8, "Y-axial direction" should be --a Y-axial direction--.

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(f) In claim 9, line 3, "receiving" should be --generating--. It is understood that the button generates an angle-regulating command, which is then received by the pressure-drawing module.

(g) In claim 12, line 11, "receiving" should be --generating--. It is understood that the button generates an activation command. Please note: For the purpose of the rejection under 35 USC 103 set forth below, examiner has treated the term "receiving" as having the meaning of the term "generating".

(h) In claim 13, lines 3-4, "X-axial direction" should be --an X-axial direction--.

(i) In claim 13, lines 6-7, "Y-axial direction" should be --a Y-axial direction--.

(j) In claim 14, line 3, "receiving" should be --generating--. It is understood that the button generates an angle-regulating command.

Appropriate correction is required.

Drawings

3. The drawings are objected to because:

(a) The drawings fail to comply with 37 CFR 1.84(p)(4) because reference character "311" has been used to designate both an X-axial pneumatic module and a panel.

(b) The drawings fail to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 312, 322 (see page 6, line 27; page 7, line 24).

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(c) Under 37 CFR 1.83(a), the drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s).

- i. first, second and third hollow portions, i.e. a total of three hollow portions (see claims 1, 3)
- ii. X-axial, Y-axial and Z- axial pressure-drawing modules as pneumatic, hydraulic and motor-and-cam modules (see claims 6-8, 10)
- iii. a pivot (see claim 11)

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, claim 3 recites the limitation "wherein said test plate further comprises: a supporting plate having said circuit plate thereon and a second hollow portion for receiving said display module; and a splint having a third hollow portion" in lines 1-5. However, claim 1 from which claim 3 depends recites the limitation "a test plate having a first hollow portion for suiting a size of said display module and a circuit plate disposed around said first hollow portion" in lines 7-9. It is understood from the claim language that the recitation of the second and third hollow portions in claim 3 combines with the recitation of the first hollow portion in claim 1 to render an effective recitation of a test plate having a total of three hollow portions. Applicant's disclosure lacks a written description about a test plate having three hollow portions. Instead, applicant's disclosure and drawings support a test plate having only two hollow portions, namely a hollow portion of a supporting plate and a hollow portion of a splint (see page 7, lines 2-8, Fig. 4).

Further, the claim language discussed above suggests that the second hollow portion of claim 3 is the first hollow portion of claim 1 because applicant's disclosure and drawings teach a circuit plate to be disposed around a hollow portion of a supporting plate (see page 7, lines 2-8, Fig. 4). Therefore, for the purpose of the rejection under 35 USC 103 set forth below, examiner has treated the second hollow portion of claim 3 as being the first hollow portion of claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of U.S. Patent No. 4,854,039 to Wendt.

With regard to claim 1, AAPA discloses a checking machine for being used in a fabricating process of a display module and checking a position of a tape automated bonding (TAB) region, comprising:

a main holder (main holder 11) having a panel (panel 111) (see Fig. 2);

a test plate (test plate 2) having a first hollow portion (hollow portion, not numbered, of supporting plate 21) for suiting a size of said display module (not numbered) and a circuit plate (circuit plate 23) disposed around said first hollow portion for suiting said position of said tape automated bonding region (TAB region 20) (see Figs. 1, 2);

and a fixing device (fixing device 14) for fixing said test plate to said panel, thereby said tape automated bonding region is electrically connected with said circuit plate (see Fig. 2).

AAPA does not teach the panel to be an inclined panel. However, Wendt teaches a checking machine (work station 10) comprising a main holder (housing 14) having an inclined panel (work surface 12) positioned at an inclination β relative to the horizontal, wherein the range of said inclination β is $0^\circ < \beta < 90^\circ$ for operator convenience (see Col. 3, lines 27-8, 42-7; Figs. 1, 2). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to replace the panel of AAPA with the inclined panel of Wendt for facilitating viewing of the panel.

With regard to claim 2, Wendt teaches the checking machine discussed above with respect to claim 1, wherein the range of said inclination β is $20^\circ > \beta > 60^\circ$ (see Fig. 2). Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the inclined panel of Wendt such that the range of inclination is $20^\circ > \beta > 60^\circ$ for facilitating viewing of the panel by an operator whose height requires such inclination.

With regard to claim 3, AAPA teaches the checking machine discussed above with respect to claim 1, wherein said test plate further comprises:

- a supporting plate (supporting plate 21) having said circuit plate thereon and a second hollow portion (not numbered) for receiving said display module (see Fig. 2);

- and a splint (splint 22) having a third hollow portion (not numbered) for covering on said supporting plate, thereby said display module is clipped between said supporting plate and said splint (see Fig. 2).

With regard to claim 4, AAPA teaches the checking machine discussed above with respect to claim 1, comprising a back light source (back light source 13) disposed in said main holder for providing a beam for checking said display module (see Fig. 2).

With regard to claim 12, AAPA discloses a checking machine for being used in a fabricating process of a display module and checking a position of a tape automated bonding (TAB) region, comprising:

a main holder (main holder 11) having a panel (panel 111) (see Fig. 2);
a test plate (test plate 2) for supporting said display module (not
numbered) (see Figs. 1, 2); and

a fixing device (fixing device 14) for fixing said test plate to said panel,
thereby said tape automated bonding region (TAB 20) is checked (see Fig. 2).

AAPA does not teach the panel to be an inclined panel. However, Wendt teaches a checking machine (work station 10) comprising a main holder (housing 14) having an inclined panel (work surface 12) positioned at an inclination β relative to the horizontal, wherein the range of said inclination β is $0^\circ < \beta < 90^\circ$ for operator convenience (see Col. 3, lines 27-8, 42-7; Figs. 1, 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the panel of AAPA with the inclined panel of Wendt for facilitating viewing of the panel.

AAPA also does not teach said fixing device to comprise a first button and a pressure-drawing device. Instead, AAPA teaches said fixing device to comprise a pressing shaft (141) for generating an activation command, and a pressure-drawing device (hoisting mechanism) for moving toward said test plate to fix said test plate to said inclined panel (see Fig. 2). However, it is well known in the art to substitute for a pressing shaft a button for generating an activation command. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the well-known pressing shaft of AAPA a well-known button for providing alternative means for generating an activation command.

With regard to claim 15, Wendt teaches the checking machine discussed above with respect to claim 12, wherein the range of said inclination β is $20^\circ > \beta > 60^\circ$ (see Fig. 2). Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the inclined panel of Wendt such that the range of inclination is $20^\circ > \beta > 60^\circ$ for facilitating viewing of the panel by an operator whose height requires such inclination.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Wendt as applied to claim 1 above, and further in view of U.S. Patent No. 3,680,805 to Stewart et al.

With regard to claim 11, Wendt teaches an end of said inclined panel as discussed above with respect to claim 1 to be connected to said main holder, but does not teach said inclination to be regulated by a pivot of said inclined panel. However, Stewart et al. teach a light table assembly comprising a main holder (mounting cabinet 13) having an inclined panel (light box 10) positioned at an adjustable inclination for operator convenience, said inclination to be regulated by a pivot of said inclined panel (see Col. 1, lines 26-50, Col. 3, line 54 to Col. 4, line 49, Figs. 1-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the inclined panel of Wendt such that it is positioned at an adjustable angle as taught by Stewart et al. for facilitating viewing of the panel.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of U.S. Patent No. 4,854,039 to Wendt and U.S. Patent No. 3,680,805 to Stewart et al.

With regard to claim 16, AAPA discloses a checking machine for being used in a fabricating process of a display module having a screen and checking a position of a tape automated bonding (TAB) region, comprising:

a main holder (main holder 11) (see Fig. 2);

a test plate (test plate 2) having a hollow portion (not numbered) for suiting a size of said display module (not numbered) and a circuit plate (circuit plate 23) disposed around said hollow portion for suiting said position of said tape automated bonding region (TAB 20) (see Figs. 1, 2); and

a fixing device (fixing device 14) for fixing said test plate to said panel, thereby said tape automated bonding region is electrically connected with said circuit plate (see Fig. 2).

AAPA does not teach the panel to be an inclined panel. However, Wendt teaches a checking machine (work station 10) comprising a main holder (housing 14) having an inclined panel (work surface 12) positioned at an inclination β for operator convenience (see Col. 3, lines 27-8, 42-7; Figs. 1, 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the panel of AAPA with the inclined panel of Wendt for facilitating viewing of the panel.

Wendt does not teach the inclination to be adjustable. However, Stewart et al. teach a light table assembly comprising a main holder (mounting cabinet 13) having an inclined panel (light box 10) positioned at an adjustable inclination for operator convenience, and an angle-regulating device (knob 35 or handle 45) for regulating said inclination until said panel is nearly perpendicular to a line of a user's vision (see Col. 1,

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lines 26-50, Col. 3, line 54 to Col. 4, line 49, Figs. 1-3, 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the inclined panel of Wendt such that it is positioned at an adjustable angle as taught by Stewart et al. for further facilitating viewing of the panel.

Allowable Subject Matter

10. Claims 5-10, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 5 and 13, the prior art does not teach in combination with all other limitations set forth in the respective claims a first button for generating an activation command, and X-axial and Y-axial pressure-drawing modules for moving toward X-axial and Y-axial directions, respectively, to fix first and second ends of a test plate in response to said activation command as set forth in the claims.

Claims 6-10 include all limitations set forth in claim 5.

Claim 14 includes all limitations set forth in claim 13.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,590,624 to Lee

U.S. Patent No. 5,497,103 to Ebert et al.

U.S. Patent No. 5,876,262 to Kelly et al.


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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Nguyen whose telephone number is 703-305-2771. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

mpn
July 25, 2003


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800